

REMARKS/ARGUMENTS

1. Claims 169-297 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant has replaced the term "alternate" with "other" as required by the Examiner. At the same time, the applicant has made every effort to revise all grammatical errors and antecedent basis problems. No new material is introduced and no new issue is raised by these amendments. Reconsideration of claims 169-297 under 35 U.S.C. 112, second paragraph, is respectfully requested.

2. Claims 244-247 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of U.S. Patent 6,532,547 granted to Wilcox.

The applicant has chosen to merge the following limitations from original claim 20 filed on March 1, 2006, into the present independent claim 244 which in turn already comprises the limitations of original claims 7 and 74, so that the amended claim 244 now comprises the limitations of original claims 7, 20, and 74 as filed on March 1, 2006.

The same following original claim 20 limitations have also been merged into the present independent claim 246 which in turn already comprises the limitations of original claims 7 and 75, so that the amended claim 246 now comprises the limitations of original claims 7, 20, and 75 as filed on March 1, 2006.

The cited original claim 20 limitations filed on March 1, 2006 are as follows:
*wherein in the redundant storage virtualization controller pair, each of the storage virtualization controllers further comprises:
a central processing circuitry for performing IO operations in response to IO requests of said host entity;
at least one IO device interconnect controller coupled to said central processing circuitry;*

5 *at least one host-side IO device interconnect port provided in a said at least one IO device interconnect controller for coupling to said host entity; and at least one device-side IO device interconnect port provided in a said at least one IO device interconnect controller coupled to at least one physical storage device through said point-to-point serial-signal interconnect;*

10 The amended independent claims 244 and 246 are believed to be patentable because Wilcox, Hoch, Johnson, Bicknell, and the applicant's admitted prior art neither disclose nor teach the aforesaid original claim 20 limitations. That is, any one of Wilcox, Hoch,
15 Johnson, Bicknell, and the applicant's admitted prior art neither discloses nor teaches "a storage virtualization controller" comprising the following limitations "*a central processing circuitry for performing IO operations in response to IO requests of said host entity;*" "*at least one IO device interconnect controller coupled to said central processing circuitry;*" "*at least one host-side IO device interconnect port provided in a said at least one IO device interconnect controller for coupling to said host entity;*" and "*at least one device-side IO device interconnect port provided in a said at least one IO device interconnect controller coupled to at least one physical storage device through said point-to-point serial-signal interconnect.*"

20 Additionally, after aforesaid merging, the amended claim 244 now comprises the limitations of original claims 7, 20, and 74, and amended claim 246 now comprises the limitations of original claims 7, 20, and 75. Because the present claim 185 comprises the limitations of original claims 7 and 20 and has been found allowable, it is further
25 believed that claim 244 which comprises allowed claim 185 plus additional limitation of original claim 74 should be allowable, too, and that claim 246 which comprises allowed claim 185 plus additional limitation of original claim 75 should be allowable, too.

30 In conclusion, the amended claim 244 comprises all the limitations of the current claim 185, which is an allowable claim as indicated by the Examiner's Office action, as well as the further limitation of "wherein said PSD is a SATA PSD," and these limitations are neither disclosed nor taught in the cited references and the applicant's admitted prior art, and thus the amended claim 244 should be in condition for allowance. Similarly, the

amended claim 246 comprises all of the limitations of current claim 185 which has been stated as being allowable, and comprises the further limitation of "wherein said PSD is a PATA PSD," and these limitations are neither disclosed nor taught in the cited references and the applicant's admitted prior art, and thus the amended claim 246 should also be in condition for allowance.

For these reasons and the fact that allowabilities of dependent claims ultimately depend upon the allowabilities of their respective base claims, reconsideration of claims 244-247 is respectfully requested, and a timely Notice of Allowance should be issued in this case.

Sincerely yours,



Date: 07/02/2007

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,242	02/18/2004	Ling-Yi Liu	IFTP0002USA9	2241
27765 7590 04/24/2007 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			EXAMINER RAY, GOPAL C	
			ART UNIT	PAPER NUMBER
			2111	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/24/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/24/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Interview Summary	Application No.	Applicant(s)	
	10/708,242	LIU ET AL.	
	Examiner	Art Unit	
	Gopal Ray	2111	

All participants (applicant, applicant's representative, PTO personnel):

(1) Gopal Ray, USPTO.

(3) Mark Rinehart, USPTO.

(2) Winston Hsu, Reg. # 41,526.

(4) _____.

Date of Interview: 18 April 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No:

If Yes, brief description: _____.

Claim(s) discussed: None.

Identification of prior art discussed: None.

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant inquired as to the period for response to the last office action. The period for response runs from the Email Notification which was sent on 04/06/07.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.



**MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.